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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,374	04/30/2004	Ting-Jui Chang	10657-US-PA	3373
31561	7590	09/13/2006	EXAMINER	
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			CHIEN, LUCY P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/709,374	Applicant(s) CHANG, TING-JUI	
	Examiner Lucy P. Chien	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) 2-5, 8, 9 and 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7 and 10 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 1,7,11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) and of Song et al (US 20010050744) in view of Yoshida et al (US 20010030726)

Koyama et al discloses (Figure 3) a back light unit (7), an optical compensation circular polarizer unit (12) set over the back light unit (7), a liquid crystal panel (23) set over the optical compensation circular polarizer unit (12), and an optical compensation circular analyzer (11) set over the liquid crystal panel (23).

Koyama et al does not disclose an optically self-compensated birefringence liquid crystal panel.

Song et al discloses (Page 1, [0006]) using an optically self-compensated birefringence liquid crystal panel to provide a liquid crystal display with wide viewing angles and to achieve a fast response speed.

It would have been obvious to one skilled in the art to modify Koyama et al's display to include Song et al's OCB-LCD motivated by the desire to provide a liquid crystal display with wide viewing angles and to achieve a fast response speed (Page 1, [0006]).

Koyama et al and Song et al do not disclose the absorption axis of the analyzer plate is perpendicular to the absorption axis of the polarizer plate, the polarizer plate form an included angle of 45 degrees which is between 40 to 50 degrees with the alignment direction of the liquid crystal panel.

Yoshida et al discloses (Page 14, [0232]) the absorption axis of the analyzer plate is perpendicular to the absorption axis of the polarizer plate, the polarizer plate form an included angle of 45 degrees which is between 40 to 50 degrees with the alignment direction of the liquid crystal panel.

It would have been obvious to one ordinary skilled in the art to modify Koyama et al's and Song et al's to include Yoshida et al's the polarizer plate form an included angle of 45 degrees which is between 40 to 50 degrees with the alignment direction of the liquid crystal panel motivated by the desire to provide an improved viewing angle characteristics in all directions including diagonal viewing directions [0016].

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) and of Song et al (US 20010050744) and of Yoshida et al (US 20010030726) in view of Konno et al (US 20030016325).

Koyama et al discloses a polarizer plate (4), a first uniaxial quarter-wave plate (3) sandwiched between the polarizer plate (4) and the liquid crystal panel (23), where the optical axis of the first uniaxial quarter-wave plate (5) and an absorption axis of the polarizer plate (4) form an included angle of about 45 degrees (Column 4, Row 40-55).

Koyama et al, Song et al and Yoshida et al do not disclose the use of a biaxial compensation film.

Konno et al discloses (Figure 5) a first biaxial compensation film (405) sandwiched between the first uniaxial quarter-wave plate (409) and the liquid crystal panel (401). The liquid crystal layer has a bend alignment and its compensated by the biaxial birefringence plate resulting in an intensity of light being maximized thus producing an image with high visibility with a very wide viewing angle. (Page 7, [0105-0109])

It would have been obvious to one skilled in the art to modify Koyama et al, Song et al, and Yoshida et al to include Konno et al's biaxial film motivated by the desire to producing an image with high visibility with a very wide viewing angle. (Page 7, [0105-0109])

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al (US 6801283) and of Song et al (US 20010050744) in view of Yoshida et al (US 20010030726) in view of Shimoshikiryou et al (20020033923)

Koyama et al, Song et al, and Yoshida et al do not disclose the second compensation film being a biaxial compensation film.

Shimoshikiryou et al discloses that by providing the biaxial birefringence on both sides of the display the retardation changes as the viewing angle is changed in the left-right direction of the pixel.

It would have been obvious to one skilled in the art to modify Koyama et al, Song et al, and Yoshida et al to include a second biaxial compensation film by Shimoshikiryou et al to producing an image with high visibility with a very wide viewing angle. (Page 7, [0105-0109])

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable Koyama et al (US 6801283) and of Song et al (US 20010050744) and of Yoshida et al (US 20010030726) and of Konno et al (US 20030016325) in view of Itakura et al (US 20030122991).

Koyama et al, Song et al, Yoshida et al, and Konno et al do not disclose that the biaxial compensation film has satisfy the following inequality relations: $n_x > n_y > n_z$ and $(n_x - n_z)/(n_x - n_y) > 6$.

Itakura et al (Page 5, [0060]) discloses The biaxial compensation film has principal refractive indices n_x, n_y , and n_z that satisfy the following inequality relations: $n_x > n_y > n_z$ and $(n_x - n_z)/(n_x - n_y) > 8$ which is $(n_x - n_z)/(n_x - n_y) > 6$, and the principal axis with the refractive index n_x is perpendicular to the alignment direction of the liquid crystal panel.

It would have been obvious to one skilled in the art to modify Koyama et al, Song et al, Yoshida et al, and Konno et al to include Itakura et al's refractive indices

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ranges of a retardation film so that a good display quality liquid crystal display device with excellent viewing angles can be obtained (Page 5, [0060]).

Allowable Subject Matter

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 11,

The prior art does not disclose nor is it obvious to combine wherein the second biaxial compensation film has principal refractive indices n_x' , n_y' and n_z' that satisfy the following inequality relations: $n_x' > n_y' > n_z'$ and $4 > (n_x' - n_z') / (n_x' - n_y') > 2$, and the principal axis with the refractive index n_s' is perpendicular to the alignment direction of the liquid crystal panel.

Sasaki et al (US 20030067574) discloses each of the quarter-wave plate and the half-wave plate satisfies a relation $N_z = (n_x - n_z) / (n_x - n_y) > 1.05$ but Sasaki et al does not disclose $n_x' > n_y' > n_z'$. (abstract)

Terashita et al (6856368) discloses $n_x' > n_y' > n_z'$ (Column 24, rows 60-67).

There are no suggestion to reasonably combine all the references to provide a second biaxial compensation film has principal refractive indices n_x' , n_y' and n_z' that satisfy the following inequality relations: $n_x' > n_y' > n_z'$ and $4 > (n_x' - n_z') / (n_x' - n_y') > 2$, and the principal axis with the refractive index n_s' is perpendicular to the alignment direction of the liquid crystal panel.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien
Examiner
Art Unit 2871


ANDREW SCHECHTER
PRIMARY EXAMINER